

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Previously Presented): A dried hydrogel, prepared by polymerizing an olefinically unsaturated carboxylic acid or its salts in a polymerization reaction mixture;

admixing the polymerization reaction mixture, before, during or after the polymerization and before drying, with an alkali metal silicate of the general formula I

$$M_2O \times n SiO_2 \quad (I),$$

wherein M is an alkali metal and n is from 0.5 to 4;

postcrosslinking a resulting polymer;

thereby obtaining a hydrogel containing said postcrosslinked polymer; and

drying said hydrogel at an elevated temperature, to obtain said dried hydrogel;

wherein said postcrosslinking is effected by a crosslinker which is a compound containing two or more groups that form covalent bonds with the carboxyl groups of said polymer.

Claim 2 (Previously Presented): The dried hydrogel as claimed in claim 1, prepared by admixing said alkali metal silicate in an amount of from 0.05% by weight to 100% by weight, reckoned on SiO₂ and based on a total monomer weight.

Claim 3 (Previously Presented): The dried hydrogel as claimed in claim 1, prepared by admixing said alkali metal silicate in an amount of from 1% by weight to 70% by weight, reckoned on SiO₂ and based on a total monomer weight.

Claim 4 (Previously Presented): The dried hydrogel as claimed in claim 1, prepared by admixing said hydrogel after said polymerization with a mixture of an alkali metal silicate and an alkali metal hydroxide, to thereby neutralize said polymer contained in said hydrogel.

Claim 5 (Previously Presented): The dried hydrogel as claimed in claim 1, prepared by admixing said hydrogel after said polymerization with a mixture of an alkali metal silicate and an alkali metal carbonate, to thereby neutralize said polymer contained in said hydrogel.

Claim 6 (Previously Presented): The dried hydrogel as claimed in claim 1, prepared by neutralizing said polymer contained in said hydrogel to a pH of from 3.5 to 9.0.

Claim 7 (Previously Presented): The dried hydrogel as claimed in claim 1, wherein a drying temperature is in the range from 40°C to 300°C.

Claims 8-9. (Cancelled)

Claim 10 (Previously Presented): A process for preparing dried hydrogel particles, comprising:

polymerizing an olefinically unsaturated carboxylic acid or its salts in a polymerization reaction mixture, to obtain a solid gel containing a polymer;

admixing the polymerization reaction mixture before or during the polymerization or admixing said solid gel with an alkali metal silicate of the general formula I



wherein M is an alkali metal and n is from 0.5 to 4;

thereby obtaining particles of a gel;

postcrosslinking said particles of the gel; and

drying said particles of the gel at an elevated temperature, to obtain said dried hydrogel particles;

wherein said postcrosslinking is effected by a crosslinker which is a compound containing two or more groups that form covalent bonds with the carboxyl groups of said particles of the gel.

Claim 11 (Previously Presented): A method for absorbing aqueous solutions, dispersions and emulsions, comprising:

contacting the dried hydrogel according to claim 1 with an aqueous solution, dispersion or emulsion.

Claim 12 (Previously Presented): An article, comprising:

the dried hydrogel according to Claim 1;

said article being capable of absorbing an aqueous fluid.

Claim 13 (Previously Presented): The dried hydrogel according to claim 1 which is capable of absorbing an aqueous fluid.

Claim 14 (Previously Presented): The dried hydrogel according to claim 1, wherein said olefinically unsaturated carboxylic acid is selected from the group consisting of acrylic acid, methacrylic acid, crotonic acid, 2-acryl-amido-2-methylpropanesulfonic acid, 2-acryl-amido-2-methylpropanephosphonic acid, vinylphosphonic acid and mixtures thereof.

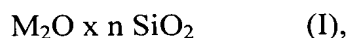
Claim 15. (Canceled)

Claim 16 (Previously Presented): The dried hydrogel according to claim 1, wherein M in formula (I) is sodium.

Claim 17 (Previously Presented): The dried hydrogel according to claim 1, wherein M in formula (I) is potassium.

Claim 18 (Previously Presented): Dried hydrogel particles, prepared by polymerizing an olefinically unsaturated carboxylic acid or its salt in a polymerization reaction mixture, to obtain a solid gel containing a polymer;

admixing said solid gel with an alkali metal silicate of the general formula I



wherein M is an alkali metal and n is from 0.5 to 4;

thereby obtaining particles of a gel;

postcrosslinking said particles of the gel;

drying said particles of the gel at an elevated temperature, to obtain said dried hydrogel particles;

wherein said postcrosslinking is effected by a crosslinker which is a compound containing two or more groups that form covalent bonds with the carboxyl groups of said particles of the gel.

Claim 19. (Canceled)

Claim 20 (Previously Presented): The dried hydrogel according to claim 1, wherein said polymer is water-insoluble.

Claim 21 (Previously Presented): The dried hydrogel according to claim 1, wherein said polymer is a copolymer.

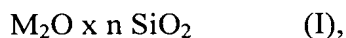
22. (Canceled)

Claim 23 (Previously Presented): The dried hydrogel according to claim 1, wherein said alkali metal silicate is soluble in water.

Claim 24 (Previously Presented): The dried hydrogel according to claim 1, wherein said alkali metal silicate is admixed with said polymerization reaction mixture after the polymerization and before drying.

Claim 25 (New): A dried hydrogel, prepared by
polymerizing an olefinically unsaturated carboxylic acid or its salts in a
polymerization reaction mixture;

admixing the polymerization reaction mixture, before or during the polymerization and before drying, with an alkali metal silicate of the general formula I



wherein M is an alkali metal and n is from 0.5 to 4;

postcrosslinking a resulting polymer;

thereby obtaining a hydrogel containing said postcrosslinked polymer; and

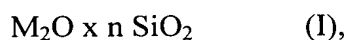
drying said hydrogel at an elevated temperature, to obtain said dried hydrogel;

wherein said postcrosslinking is effected by a crosslinker which is a compound containing two or more groups that form covalent bonds with the carboxyl groups of said polymer.

Claim 26 (New): A process for preparing dried hydrogel particles, comprising:

polymerizing an olefinically unsaturated carboxylic acid or its salts in a polymerization reaction mixture, to obtain a solid gel containing a polymer;

admixing the polymerization reaction mixture before or during the polymerization with an alkali metal silicate of the general formula I



wherein M is an alkali metal and n is from 0.5 to 4;

thereby obtaining particles of a gel;

postcrosslinking said particles of the gel; and

drying said particles of the gel at an elevated temperature, to obtain said dried hydrogel particles;

wherein said postcrosslinking is effected by a crosslinker which is a compound containing two or more groups that form covalent bonds with the carboxyl groups of said particles of the gel.